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EXAMINER

PRICE, NATHAN E

ART UNIT

PAPER NUMBER

2194

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/690,689	<b>Applicant(s)</b> MONNIE ET AL.	
	<b>Examiner</b> NATHAN PRICE	<b>Art Unit</b> 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/21/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1 – 45 are pending.
2. This Office Action is in response to communications received 21 April 2008. Previous objections and rejections not included in this Office Action have been withdrawn.

### ***Response to Arguments***

3. Applicant's arguments filed 21 April 2008 have been fully considered but they are moot or not persuasive.
4. Applicant argues the cited teachings fail to teach the objects are accessible to plural applications. However, Cranston teaches multiple applications have direct access to the messages (col. 3 lines 23 – 33).
5. Applicant argues Silberschatz teaches only the recipient of messages is identified. However, the ID of the sender is provided in the receive command described between the last 2 paragraphs on page 104. It is obvious to place the ID in the queue with the reference because the ID must be stored until the receive function is called so that it can be supplied as disclosed by Silberschatz.
6. See the current rejections regarding limitations added by amendment.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It does not appear that the original disclosure supports the recited object reference that comprises a reference to one of the applications. The original disclosure supports a reference to one of the applications being stored in the queue, which is added to the queue when the object reference is added to the queue, but this reference is not part of the object reference as claimed (Fig. 12, object reference 418, application reference 420; Specification p. 25 ¶13).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 – 4, 6, 9 – 19, 21, 24 – 34, 36 and 39 – 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranston et al. (US 6,829,769 B2; hereinafter Cranston) in view of Galluscio et al. (US 7,152,231 B1; hereinafter Galluscio) and Silberschatz (Silberschatz et al., "Applied Operating System Concepts," First Edition, John Wiley & Sons, Inc., 2000; pages 87-114.).

9. As to claim 1, Cranston teaches a system for the concurrent operation of plural computer applications, said system comprising:

- (a) a computer storage medium including a shared object space selectively connectable to each of a plurality of computer applications, said shared object space capable of storing:
  - (i) a plurality of objects accessible to each of said plural computer applications connected to said shared object space [col. 3 lines 14 – 36]; and
  - (ii) a queue associated with said shared object space and capable of storing a plurality of references to objects, each a reference to an object received from at least one of said plural computer applications and identifying an individual object and an application placing said reference to said individual object in said queue [col. 3 lines 14 – 36]; and

- (b) at least one computer comprising at least two computer applications concurrently executing, a particular object updateable by a first of said concurrently executing applications when said one application is connected to said shared object space and in control of a reference from said queue identifying said particular object, said first application relinquishing control of said reference to said particular object to enable updating said particular object by another application when another application places said reference in said queue [col. 3 lines 14 – 36; col. 9 lines 30 – 40; col. 11 line 65 – col. 12 line 2].

10. Cranston fails to specifically teach that each said computer application operating in its own virtual machine. However, Galluscio teaches or at least implies that each said computer application operating in its own virtual machine by suggesting the use of Java [col. 6 lines 5 – 17]. Furthermore, Galluscio teaches at least one computer comprising at least two computer applications concurrently executing on respective virtual machines, a particular object updateable by one of said concurrently executing applications when said one application is connected to said shared object space and in control of an object reference from said queue identifying said particular object [abstract; col. 2 lines 17 – 21; col. 6 lines 5 – 17]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Cranston does not specify a programming language and Galluscio

lists languages [col. 6 lines 5 – 17] that may be used in a similar communication system that uses a shared memory region and message queue [abstract].

11. Cranston fails to specifically teach a reference to said particular object identifies another application as an application placing said reference in said queue. However, Silberschatz teaches updating said particular object by another application when said reference to said particular object identifies another application as an application placing said reference in said queue [p. 103 ¶1; p. 104 2<sup>nd</sup> to last ¶]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Silberschatz teaches logical implementations, including the information that must be provided, of communication and Cranston teaches a physical implementation of communication between processes.

12. As to claim 2, Cranston teaches the queue is a predefined type [col. 3 lines 14 – 36].

13. As to claim 3, Cranston teaches the queue is customized [col. 8 lines 28 – 48].

14. As to claim 4, Cranston modified by Galluscio teaches the queue is a "first-in-first-out" queue [Galluscio: col. 5 lines 47 – 56].

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15. As to claim 6, Cranston modified by Galluscio at least implies each said virtual machine comprises a computer executable instruction in conformance with a virtual machine specification, said instruction executing on said computer [Galluscio: col. 6 lines 5 – 17].

16. As to claim 9, Cranston modified by Galluscio at least implies the shared object space is operably connectable to a non-object-oriented application [Galluscio: col. 6 lines 5 – 17].

17. As to claim 10, Cranston modified by Galluscio teaches the non-object oriented application is a "C" program [Galluscio: col. 6 lines 5 – 17].

18. As to claim 11, Cranston modified by Galluscio teaches access to at least one of said plurality of objects by said plural computer applications is synchronized [Galluscio: col. 6 line 58 – col. 7 line 4].

19. As to claim 12, Cranston teaches said reference to an object further comprises an indication of a position of said reference in a sequence of references to objects placed in said queue by an application [col. 3 lines 14 – 36; col. 4 line 61 – col. 5 line 7; col. 8 lines 3 – 27; col. 10 lines 37 – 50].



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20. As to claim 13, Cranston teaches the plural computer applications pertain to at least one of: (a) stock trading; (b) communications processing; and (c) internet services [col. 3 lines 14 – 36].

21. As to claim 14, Cranston teaches at least one of said plurality of objects is copy shared among said plural applications [col. 3 lines 14 – 36].

22. As to claim 15, Cranston modified by Galluscio teaches at least one of said plurality of objects is direct shared among said plural applications [Galluscio: col. 4 lines 28 – 46].

23. As to claim 16, see the rejection of claim 1. Cranston further teaches the queue receiving said references from a first set of said applications and releasing said references to a second set of applications [col. 3 lines 14 – 36].

24. As to claims 17– 19, 21, 24 – 26 and 28 – 30, see the rejection of claims 2 – 4, 6, 9 – 11 and 13 – 15.

25. As to claim 27, the status identifier is “currently amended” but the claim does not appear to be amended. If it was intended to be amended in a way similar to claims 12 and 42, then see the rejection of claim 12. However, the claim will be treated as it currently appears. Cranston fails to specifically teach the object reference further

comprises a reference to one of said computer applications as claimed. However, Silberschatz teaches the object reference further comprises a reference to one of said computer applications [p. 103 ¶1; p. 104 2<sup>nd</sup> to last ¶]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Silberschatz teaches logical implementations, including the information that must be provided, of communication and Cranston teaches a physical implementation of communication between processes.

26. As to claim 31, see the rejection of claim 1. Cranston further teaches the at least one application both storing said references in said queue and receiving said references from said queue [col. 3 lines 14 – 36].

27. As to claims 32 – 34, 36 and 39 – 45, see the rejection of claims 2 – 4, 6 and 9 – 15.

28. Claims 5, 20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranston (US 6,829,769 B2) in view of Galluscio (US 7,152,231 B1) and Silberschatz as applied to claims 1, 16 and 31 above, and further in view of Martin et al. (US 7,017,160 B2; hereinafter Martin).

29. As to claims 5, 20 and 35, Cranston fails to specifically teach a "last-in-first-out" queue. However, Martin teaches the queue is a "last-in-first-out" queue [col. 5 lines 39

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– 58]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Cranston teaches using queues to manage object sharing [col. 4 lines 1 – 16] and Martin teaches other structures, such as a FIFO, can be used [col. 5 lines 39 – 58].

30. Claims 7, 8, 22, 23, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranston (US 6,829,769 B2) in view of Galluscio (US 7,152,231 B1) and Silberschatz as applied to claims 1, 6, 16, 21, 31 and 36 above, and further in view of Jaworski (Jaworski, Jamie, "Java 1.1 Developer's Guide," Second Edition, Sams.net Publishing, 1997; pages 3-10 and 983-990.).

31. As to claims 7, 22 and 37, Cranston fails to specifically teach a Native Method Interface. However, Jaworski teaches the shared object space is connected to each said virtual machine through a Native Method Interface [page 984, Java Native Interface]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Cranston combined with Galluscio teaches sharing objects with programs developed in different languages including C, C++ and Java and provides an example in C [Galluscio: col. 6 lines 5 – 30] and Jaworski teaches how to enable Java to use C and C++ programs for features not available in Java [page 984].

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32. As to claims 8, 23 and 38, Cranston modified by Jaworski teaches the system includes a default directory with a native language library file [Jaworski: page 989, Creating a Shared Library].

### ***Conclusion***

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN PRICE whose telephone number is (571)272-4196. The examiner can normally be reached on 6:00am - 2:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195